Lord Kitchener as a Scientific Worker.

Life of Lord Kitchener. By Sir George Arthur. In three volumes. Vol. i. Pp. xxvi + 326. Vol. ii. Pp. xi + 346. Vol. iii. Pp. xi + 413. (London: Macmillan and Co., Ltd., 1920.) Price *2l. 12s. 6d.* net.

SIR GEORGE ARTHUR'S account of the work of the eminent soldier and administrator who is the subject of his three volumes is impressive not only on account of the series of successes which Lord Kitchener obtained in different and dissimilar fields, but also because of the methods by which so much was attained, for the biography is presented with such vividness that the careful reader can discern the man apart from his work. It is true that many of the episodes in the career of Lord Kitchener are mentioned with scarcely a comment, where expansion would have been desirable. Nevertheless, there is sufficient for interest and instruction in the mere relation of the stirring events in which he played so prominent a part. To have dealt with them in detail would perhaps have unduly expanded the volumes.

Kitchener possessed a variety of qualities and tastes obvious only to his intimates. Those not in intimate official relation with him in his work cannot readily form a conception of his methods. How much of his inflexibility he owed to his never having been cast in the public-school mould it is impossible to say, but to his early scientific training and his scientific tastes he no doubt owed the precision and accuracy which he required from those about him and to which he subjected himself. He was a quick thinker, readily grasping the conceptions of others, rapid in his decisions, rejecting or accepting proposals with astonishing celerity. The initiative always lay with him. It was he who gave scientific form to all his own projects. The spirit was his. It is the personality of the man which interests us as we pass from work to work.

His methods were not those of the orthodox administrator, and we cannot conceive Kitchener sheltering himself behind committees, though he frequently summoned conferences. Lord Salisbury, in his preface to the book, describes him as a man of sentiment, and pre-eminently as a man of imagination. Nothing can be more true; but it would be a mistake to suppose that, "bold and independent" as was his mind, he undervalued the opinions of experts who ventured to question his conclusions. If he never argued, he was ready to listen, and the latitude which he gave to a subordinate in devising means to an end was the measure of that confidence he reposed in his staff which was his marked characteristic. His conclusions were ever his own, and were irrevocable. Although to him the end was everything, he was less impatient of detail than is generally supposed. For precedent, of course, he cared nothing.

The truth appears to be that Kitchener's early scientific training profoundly influenced him in his subsequent career. That earnestness which he displayed in the solution of engineering undertakings was as evident in his readiness to adapt new knowledge in any branch of science to the solution of his administrative problems, and experts could readily discern the scientific method by which he reached his conclusions, for he reasoned from facts. As Sir George Arthur alludes only very briefly to the influence which Kitchener, as Commander-in-Chief in India, exerted on the reduction of disease and invaliding incidence in the Army of India, this influence is likely to be overlooked. In the history of this branch of Army administration the work of the Commander-in-Chief must always occupy a prominent place. Here he left a permanent monument to himself. It would have been strange had it been otherwise, for by his previous training and experience problems of public health were certain to appeal to him by reason of their bearing upon Army efficiency, and so we read:—

"Recent discoveries in bacteriology facilitated a systematic investigation which Kitchener, after the conference of 1905, instituted into the causation and origin of these maladies: a campaign against the house-fly, with its nidus in the night-soil accumulated near cantonments, and the mosquito—the recognised agents of the two diseases—resulted in a most significant drop of nearly one-half in the death and sickness rates. Stringent preventive regulations were issued as to sanitation, inoculation for malaris [*sic*], the purification of water, and the preservation of all food and drink from contamination; and it was peremptorily ordered that all persons—British or Native—before being employed in the preparation of any sort of eatables intended for the troops, should undergo a medical examination. Depots were also established in the hills for enteric convalescents, often carriers, who had hitherto not been sufficiently recognised as a source of danger to their comrades; and technical training in hygiene was provided for selected N.C.O.'s and men, each of these sanitary sections being supervised by a medical officer."

Similarly we see in other incidents the influence of Kitchener's early training and his scientific sympathies in many of his epoch-making measures. He was a lover of learning, and had that delight in it which we are told he endeavoured to inculcate in the students of the Staff College

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at Quetta. His foundation of this college and his establishment of the institution at Khartum are evidence sufficient of his interest in education. Indeed, in his knowledge of science and in his appreciation of its utility Kitchener may be said to stand alone amongst great military administrators.

We get some clue to the Kitchener method if we bear these facts in mind, and we are enabled to see how, forsaking the practice of a scientific profession for the more ambitious sphere of civil administration and diplomacy, varying these with intervals of command of armies in peace and war, ending as an organiser of victory, he accomplished his ends with such extraordinary success.

No account of the life and work of this man will ever be complete which neglects a consideration of the influence exerted upon him by his early education. Kitchener understood the language of men of science. Consciously or unconsciously he adopted their methods. He was never out of date. We get a clue to his dislike of the bureaucrat, to his hatred of red tape, and to his contempt for precedent and of War Office methods, if we bear these in mind. We are not surprised when we hear that he "would rather sweep a crossing" than go to the War Office, for freedom to work on new lines—"always a learner," as his biographer tells us—was the very essence of the Kitchener method. When Lord Curzon and Lord Haldane characterised his organisation of the Army in India as "scientific" they were nearer the mark than perhaps even they recognised; for in the widest acceptation of the term Kitchener was a man of science, and Sir George Arthur's record of his remarkable career will find many appreciative readers in the scientific world.

The Nation's Food.

Food Supplies in Peace and War. By Sir R. Henry Rew. Pp. vii + 183. (London: Longmans, Green, and Co., 1920.) Price 6*s.* 6*d.* net.

SIR HENRY REW has the happy and unusual faculty of making statistics interesting; indeed, the only time when he is less interesting than usual is when he is quoting fewer figures. In this little book he has brought together the vital statistics of British food supplies and set them out: they tell their own tale so plainly that even the ordinary non-statistical person can understand.

The book was badly needed, for it is highly important that the average man should realise the facts. Unfortunately, agricultural policy is a matter for politics and emotions, and political considerations have sometimes been more in evidence than facts or business principles. Recently a bishop wrote to the *Times* making the astonishing statement that he thought the bread subsidy was paid to farmers to encourage corn production. If such amazing lack of knowledge can occur in high places, what must be the state of the ordinary voter's mind? Sir Henry Rew's book will supply the facts for those who will take the trouble to read it.

In the first chapter he deals with the problem as it was before the war, when we had a considerable balance of money due from abroad which we could take either in food or in other commodities. The general result is shown in the following table:—

—	Weight in metric tons used in the United Kingdom per annum.[1]		
	Home-grown.	Imported.	Total.
Cereals	1,010,000	3,855,000	4,865,000
Meat	1,615,000	1,070,000	2,685,000
Poultry, eggs, game, and rabbits	170,000	161,000	331,000
Fish	715,500	132,900	848,400
Dairy produce (including lard and margarine) ...	4,704,000	527,800	5,231,800
Fruit	341,000	930,000	1,271,000
Potatoes and other vegetables	4,788,000	694,000	5,482,000
Sugar (including cocoa and chocolate)	—	1,657,000	1,657,000

[1] A certain amount of cottage and farm produce is not included in the above table.

About one-fifth of the cereals, more than half the meat, and nine-tenths of the dairy produce and of the potatoes were home-grown. The total amount of foodstuffs, home-grown and imported, was considerable, and the nation was amply supplied with food. In 1913 the main sources of supply outside the United Kingdom were, in order of value of shipments, the United States, Argentina, Denmark, Canada, India, Australia, Russia, the Netherlands, Germany, New Zealand, Austria-Hungary, France, Spain, and Ceylon.

The second section of the book deals with war-time conditions. The outbreak of the war came, no doubt deliberately, at the time when the harvest of Central Europe was practically all gathered in, and when, therefore, there were ample stocks of food for a year. On our side the wheat crop in the United States was good, and although in Canada it was short, the total North American supply was well above the average. The year 1915 opened badly, as the Russian supplies were cut off in February. The situation was saved,

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